

SCIENCE REVIEW BY MARCIA BARTUSIAK

The earthly passions of a pop icon physicist

STEPHEN HAWKING

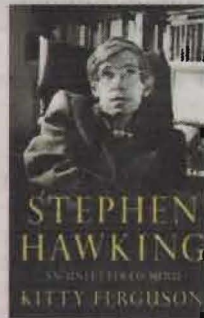
An Unfettered Mind

By Kitty Ferguson

Palgrave Macmillan. 310 pp. \$27

On Jan. 8, Stephen Hawking turned 70. Diagnosed at the age of 21 with amyotrophic lateral sclerosis, also known as Lou Gehrig's disease, he had been expected to live no longer than two or three more years. He beat the odds by half a century.

In celebration of this noteworthy event, science writer Kitty Ferguson has brought out a new edition of her 1991



biography of the British theoretical physicist, then titled "Stephen Hawking: Quest for a Theory of the Universe." Although more than half of the book remains essentially the same, new information about Hawking's private life that came to

light over the past two decades makes for a more thorough account. Ferguson has fleshed out the story, enhancing her earlier narrative appreciably.

Born during World War II, Hawking grew up in an Addams-family-style house with his two sisters and an adopt-

ed brother in the town of St. Albans, just north of London. It was a "highly intelligent, eccentric family," writes Ferguson, "their noses buried in their books" during dinner. Outgoing and playful, Hawking as a child didn't make the best marks in grade school, for he stubbornly absorbed only those subjects he believed worth knowing.

In college at Oxford, Hawking was recognized as brilliant but underchallenged. Hawking himself admits that it was his ensuing illness — the possibility of an early death — that put an end to his academic laziness. And after he moved to Cambridge University for his doctoral studies, it was his marriage to Jane Wilde, a student of languages, that gave him the will to live.

Hawking chose to specialize in cosmology at a time when it was more speculation than science, a risky choice. Yet, upon obtaining his PhD in 1966, he found almost immediate success. First, he proved that the Big Bang not only appeared to emerge from an infinitely dense point of mass-energy, but that it must have. Then he discovered a vital link between gravity and quantum mechanics, two fields completely incompatible before then. He saw that black holes, the ultimate gravitational pits, should slowly evaporate as they emit radiation generated in the quantum turmoil at their outer boundaries. Here Ferguson provides engaging and helpful explanations of the physics behind these triumphs.

The author also reveals what (she confesses) she could not report the first time

around: Behind the curtain during the 1980s was a marriage in distress. As Hawking's condition worsened — he was no longer able to write, walk or speak well enough to be understood — and Jane was pushed into the shadows amid his growing fame, strains grew between them, particularly regarding their views on religion (she for, he against). In response, with Hawking's knowledge, Jane engaged in a platonic romance with a musician friend, whom she later married. Hawking himself found solace with one of his nurses, Elaine Mason, whom he eventually wed in 1995 (and divorced 11 years later in the wake of allegations that Mason was abusive).

Hawking's life at this stage stands in sharp contrast to his earlier years. With the 1988 publication of his phenomenal bestseller "A Brief History of Time," Hawking became an international celebrity — more than that, a pop icon. He now inspired operas, film documentaries and plays. Ferguson's book almost becomes a travelogue as Hawking jets around the world to attend conferences, collect myriad awards, guest star on "Star Trek" or lecture on space travel and extraterrestrial intelligence.

Along the way, Hawking's science became less rigorous and more exploratory. According to his friend and fellow theorist Kip Thorne, Hawking's search for certainty had turned into a quest for "high probability and rapid movement towards the ultimate goal of understanding the nature of the universe."

The new material that Ferguson provides appears caught up in this whirl; a section on the newfound accelerating universe, for example, swiftly shifts to Hawking's appearance in an episode of "The Simpsons." And as Hawking's ideas grow more speculative, her translations of the science become more labored. Moreover, newcomers to cosmology will not realize that Hawking's most current ideas that she so carefully explains are just a few of the many theories now filling physics journals on such subjects as wormholes, multiple universes and the emergence of space and time. Missing is a succinct overview of present-day theoretical cosmology and Hawking's exact place in it.

But Ferguson, who once assisted Hawking on a book project, is an unabashed acolyte. She declares him "one of the intellectual giants of our modern world — and among its most heroic figures," a mind-set that suffuses all that she writes. She even spends three pages praising his latest three-part television series. What still awaits is the definitive biography of Hawking, one that more objectively captures both the complex man and his complex science.

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